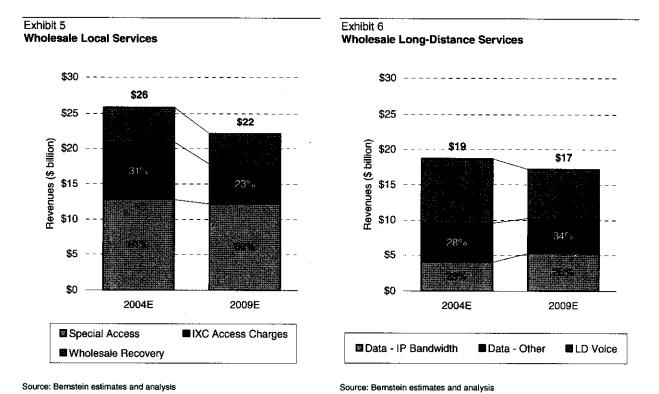
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### The Wholesale Long-Distance Market

The market for wholesale long-distance services is highly competitive. During the telecom investment bubble of the late 1990's, multiple upstart carriers spent tens of billions of dollars building high-capacity long-haul networks. With no existing customer relationships, and under the belief that demand for long-haul bandwidth would grow exponentially and endlessly, these carriers converged on the same business model of selling wholesale capacity. It was also the accepted wisdom at the time that demand for data bandwidth would far outstrip voice, and so these carriers largely focused their networks around data protocols, specifically IP. Only recently did they begin to recognize and pursue wholesale voice as a revenue growth driver/stabilizer.

This quick history explains the structure of the wholesale long-distance market today. In voice services, AT&T and MCI currently dominate with, we estimate, more than 50% share collectively. Sprint and Qwest have significant but smaller positions. Other carriers, including the "new" ones, account for about 21% of wholesale long-distance voice revenues. Through 2009, however, we expect increases in the shares of Sprint, Qwest, and other carriers, primarily at the expense of AT&T and MCI (Exhibit 7 and Exhibit 8). The RBOCs' expansion into long-distance will be a major driver of increased demand for wholesale voice. However, both AT&T and MCI compete with the RBOCs in the voice market; even with their retreat from the consumer market, AT&T and MCI still compete with the RBOCs in the enterprise space. Therefore, we believe the RBOCs are more likely to purchase capacity from other carriers: for example, BellSouth currently buys wholesale capacity from Qwest, and SBC from Wiltel. With SBC, BellSouth and Verizon jointly controlling greater than half of the wireless subscribers in the U.S., wholesale voice sales into that segment will likely close to AT&T and MCI longer term.



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Exhibit 7
Carrier Shares of Wholesale LD Voice, 2004E

2004E Total = \$9.1 billion

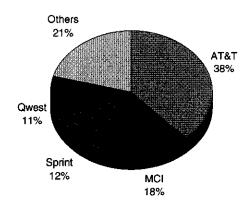
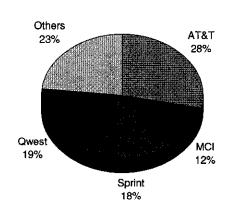


Exhibit 8
Carrier Shares of Wholesale LD Voice, 2009E

2009E Total = \$6.9 billion



Source: Bernstein estimates and analysis

Source: Bernstein estimates and analysis

In wholesale long-distance data services, AT&T, Sprint, and Qwest currently play significantly smaller roles than they do in voice. MCI, an early entrant with its UUNet IP backbone, has 15% share of the market, putting it behind AT&T but not by as large a margin as in wholesale voice. Other carriers currently control more than 50% share collectively – the business models of these carriers emphasize wholesale data. By 2009, we project that AT&T, Sprint, and Qwest will gain share mainly at the expense of MCI, while other carriers roughly hold on their piece of the market (Exhibit 9 and Exhibit 10). AT&T is expected to benefit from its continued investment in its IP network and managed services capabilities. Qwest will leverage its relationships with the RBOCs, particularly BellSouth, but will see slower growth because the RBOCs' penetration into long-distance data will be gradual. Sprint is seen to play the role of arms dealer to the cable MSOs and as a low-cost alternative to AT&T, while MCI will be hurt by continued financial pressures and an inability to invest in its network. Meanwhile, the other carriers will largely continue to serve the most price-sensitive wholesale customers, those who need pure bandwidth and little else.

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Exhibit 9
Carrier Shares of Wholesale LD Data, 2004E

2004E Total = \$9.6 billion

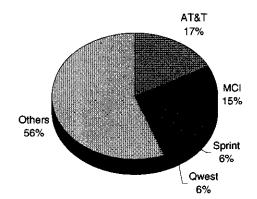
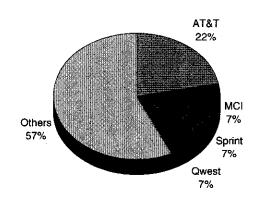


Exhibit 10 Carrier Shares of Wholesale LD Data, 2009E

2009E Total = \$10.3 billion



Source: Bernstein estimates and analysis

Source: Bernstein estimates and analysis

## Wholesale Price Declines are More Rapid than in Retail

With an excess of supply and minimal product differentiation, the wholesale market suffers from intense price pressures: unit prices for wholesale services decline faster than for similar retail services. Because wholesale contracts are negotiated on a case-by-case basis (other than those for local tariffed services, which are regulated), contract terms and pricing are widely varied and difficult to generalize. However, carriers on both the supply and demand sides report that wholesale voice pricing typically falls at a steady rate of 10-12% per year, while data price declines regularly exceed 20%. Contract pricing for high-capacity (multi-gigabit) IP bandwidth has fallen by 35-40% per year.

Note that these are unit price declines for the same product; in other words, we're comparing pricing for, say, an OC-3 circuit in one year versus the same OC-3 circuit in the previous year. There are also volume discounts for going to higher bandwidth products: for example, an OC-12 circuit may cost only 2.5 times as much as an OC-3, even though it offers 4 times the bandwidth. In any one year, some fraction of wholesale customers will upgrade to higher speed lines to take advantage of this volume discount, effectively reducing their unit cost. Combining the impact of such volume discounts and like-for-like price declines, the wholesaler's actual revenue received per unit of supplied capacity declines even faster. We believe unit revenues for wholesale IP services have fallen by as much as 45-50% per year in recent years.

In our recent interviews with carriers, we have heard indications that wholesale price declines are abating. After several years of free-falling prices, carriers today are more reluctant to offer deep discounts, especially as volume growth (in percentage terms) has slowed. Furthermore, wholesale providers are evolving their service offerings, moving toward a managed services model, whereby they provide not only raw capacity, but also consulting, billing, customer care, and other services. Two examples of this are Qwest's relationship with BellSouth and Sprint's relationships with Time Warner cable (supporting their VoIP implementation). Wholesale carriers are thus attempting to differentiate their service offerings.

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## Margins are Thin

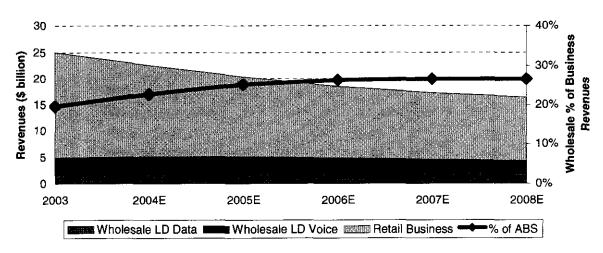
The costs associated with a wholesale business are mainly fixed in the network; therefore, profitability hinges on scale and operational efficiency. For a carrier in desperation (and there have been plenty of examples recently), it is all too tempting to price at marginal cost to drive volume. Unfortunately, marginal cost is usually far below average operating cost, resulting in thin, if not negative, operating margins. (As an aside, because the bulk of costs are in depreciation and SG&A, gross margin is often an irrelevant metric in the wholesale market). Margins do vary across carriers, however, depending on the carrier's operational efficiency and whether the same network also transports the carrier's retail traffic, helping to spread operating costs across a broader base of revenue.

### Impact on AT&T

Among the companies in our coverage, AT&T is most exposed to the wholesale long-distance voice and data segments, being a major provider in each. In AT&T's income statement, wholesale is included in, but not broken out from, its Business Services division. We estimate that wholesale services accounted for about 20% of Business revenues in 2003, and 23% in 2004. With the ongoing declines in its retail business, AT&T's services mix is shifting toward wholesale: by 2009, we believe wholesale will represent 27% of AT&T Business Services' (ABS) revenues (Exhibit 11). There are two important implications of this:

- First, AT&T's revenue trend will differ from what one would infer by looking only at retail services trends. Specifically, AT&T's projected revenues would be understated, because one would fail to recognize that some of the projected revenue losses in retail will be offset by gains in wholesale. We believe investors and analysts are not giving AT&T proper credit for its role in the wholesale market.
- Second, AT&T's profit margins will likely be lower than what one would project from the company's retail activities. This is particularly true because wholesale revenues will *substitute* for retail, rather than being *incremental* to them. (One could conceivably argue that incremental wholesale sales could carry higher margin, since the capacity is already there and it requires little additional operating overhead.) Even putting this argument aside, AT&T's overall margins will be depressed by the fact that wholesale services contribute less revenue per unit capacity so less revenue overall will be derived for the same amount of network capacity (and operating cost).

Exhibit 11
Wholesale Share of AT&T Business Services: (ABS) Revenues, 2003 – 2008E



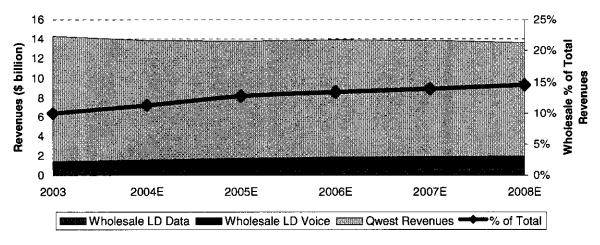
Source: Bernstein estimates and analysis



#### **Impact on Qwest**

The impact on Qwest will be similar, but somewhat muted relative to AT&T, given Qwest's smaller participation in the wholesale market. Wholesale long-distance voice and data contributed 11% of total revenues in 2004, and will grow to 15% by 2009 (Exhibit 12). Importantly, Qwest's wholesale *local* services are excluded from this analysis, since those services, being tariffed, do not suffer from the degree of price pressures and margin compression of wholesale long-distance services.

Exhibit 12
Wholesale (Long-Distance Only) Share of Qwest Total Revenues, 2003 – 2008E



Source: Bernstein estimates and analysis

### Impact on the RBOCs

The evolution of the wholesale local services market will have a mostly immaterial impact on Verizon, SBC, BellSouth, and the ILEC portion of Qwest. Wholesale local revenues currently represent 16% of these companies' total revenues. We expect the total wholesale local market to decline by 8% over the next five years – leading to a revenue impact on the Bells of less than 130bp. Moreover, much of the decline in wholesale revenues will be (at least partly) triggered by their own success on the retail side, winning back share lost to UNE-P competitors and expanding into long-distance voice and data services (the latter decreasing wholesale revenues from access charges and special access data paid to the Bells by competitors). In other words, the net impact of the RBOCs' retail gains and wholesale losses should be positive overall.

### Final Word: Be Wary of Revenue Evaporation in an M&A Situation

Because wholesale revenues are carrier-to-carrier (as opposed to customer/consumer-to-carrier), the size of the wholesale market – and therefore the opportunity for wholesale providers – is sensitive to the structure of the telecom industry. Consolidation will tend to decrease the need for carriers to purchase services from each other, thus reducing wholesale revenues. On the other hand, the emergence of new competitors will likely have the opposite impact, as many of the upstarts would need to purchase capacity and connectivity from other carriers to complete their networks and reach their customers.

In the event of a merger between two carriers that have a wholesale relationship with each other, the revenues of the merged entity will be less than the sum of the pre-merged companies. Wholesale revenues that were previously collected by one merger partner from the other would subsequently be classified as an internal transfer cost, and kept off the reported income statement. The result is a decrease in reported

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revenues and costs of goods sold, and an increase in reported profit margins (assuming the wholesale services were profitable). This would be true even before any operational synergies were realized.

As a secondary effect, a merger could decrease the available wholesale revenues for other carriers. If one merger partner is a potential wholesale supplier to the other, then they would likely obtain wholesale services from each other, decreasing their reliance on third-party carriers. This would particularly impact the competitive wholesale long-distance market, while the local market would see less of an effect due to the ILECs' monopoly over local access.

## Valuation Methodology

For all the companies in our coverage, we leverage three distinct valuation methodologies: Relative Price-to-Forward Earnings (P/FE), EV/EBITDA and Discounted Cash Flow Analysis (DCF). We see Price-to-Forward Earnings as most valuable for assessing the relative expensiveness or cheapness of a company against its own history. P/FE has historically been a poor predictor, however, of the timing of valuation swings though is a reasonable predictor of forward relative performance in the sector.

In contrast to P/FE, EV/EBITDA is a poor tool for analyzing the valuation level of a company against history but a very good tool for assessing valuation levels across similarly-structured companies in the same industry. EV/EBITDA's shortfall as a tool for making investment decisions in telecom, however, is its failure to capture capital spending, a critical driver of free cash flow generation in the sector.

Lastly, we find DCF analysis most useful for setting target prices. On the positive side, DCFs -- when completed objectively and employing textbook approaches to calculating weighted average costs of capital – capture both differences in business mix and operational performance as well as differing levels of capital discipline, both shortfalls of EV/EBITDA. In addition, DCFs aren't skewed by historical spending above trend which, while potentially indicative of a lack of capital discipline, should not necessarily receive the strong weighting accorded it within the P/FE metric. The shortfall of the DCF is its reliance on numerous modeling assumptions and any subjectivity incorporated into the WACC calculation and long-term growth assumptions for the company.

### Risks

Our forecast of the wholesale market is based on an analysis of the demand drivers, combined with our outlook on pricing trends and competitive dynamics. All of these are difficult to predict, and are subject to change in the event of unforeseen industry circumstances. As outlined in the report, one of the biggest potential sources of uncertainty is the evolution of the telecom industry structure. Consolidation among service providers could dramatically reduce the size of the wholesale market, and the relative shares of the various carriers in this market.

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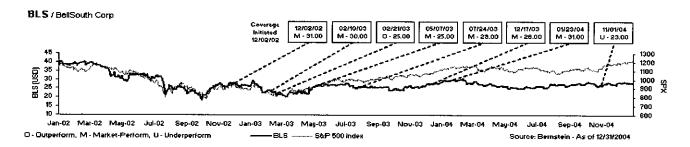
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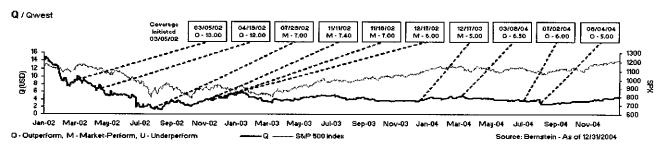
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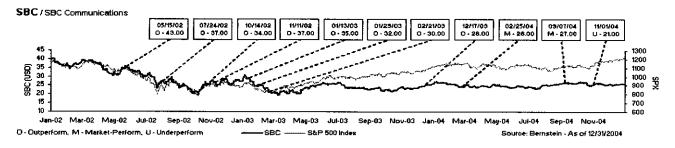
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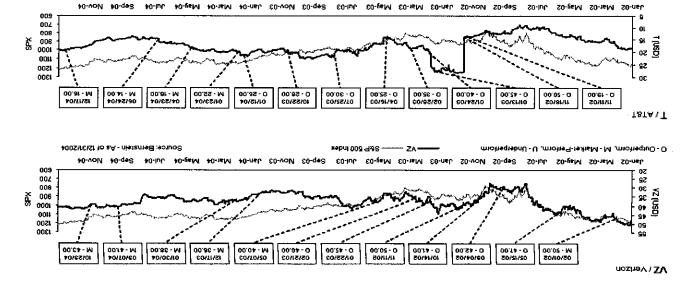
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